ROZENTAL', D.A.; ZHDANOVA, S.G.; KUZNETSOVA, A.S.

Catalytic oxidation of petroleum bitumen. Nefteper. i neftekhim. no.12:26-28 '64. (MIRA 18:2)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.

ZHDANOVA, S.M.

Significance of x-ray examination in the determination of pathological changes in the adrenal glands causing symptomatic hypertension. Vest. rent. i rad. 39 no.1:46-48 Ja-F '64. (MIRA 18:2)

1. Rentgenovskoye otdeleniye (zav. - doktor med. nauk Z.G. Spektorova) Instituta terapii AMN SSSR, Moskva.

ZHDANOVA, T.

On new tracks. NTO 3 no.3:62-63 Mr '61. (MIRA 14:3)
(Railroads—Rails—Fastening)

SYCHEV, K.A., red.; ZHDANOVA, T.A., red.

[Materials on observations of the research drifting stations "Severnyi Polius-8" and Severnyi Polius-9" in 1960-1961.] Materialy nabliudenii nauchno-issledovatel'skikh dreifuiushchikh stantsii "Severnyi polius-8" i "Severnyi polius-9" 1960/1961 g. Moskva, Izd-vo "Transport," 1964. 598p. Leningrad. Arkticheskiy i Antarkticheskiy nauchno-issledovatel'skiy institut. Trudy, vol.272) (MIRA 17:9)

USTINOVICH, D.A.; TYDEL'SKAYA, R.O.; BELOGUROVA, R.A.; DOLGANOV, L.V., kand. geogr. nauk, red.; ZHDANOVA, T.A., red.; STUL'CHIKOVA, N.P., tekhn. red.

[Transactions of the Soviet Antarctic Expedition] Trudy Sovetskoi antarkticheskoi ekspeditsii, 1955- . Leningrad, Izd-vo "Morskoi transport." Vol.27. [Observations from the Third Sea Expedition, 1957-1958] Tret'ia morskaia ekspeditsiia, 1957-1958 gg.; materialy nabliudenii. Pod red. L.V. Dolganova. 1962. 235 p. (MIRA 16:4)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955-.
(Antarctic regions--Meteorology--Observations)

SYCHEV, K.A., red.; ZHDANOVA, T.A., red.

[Materials of the observations of the "North Pole-8" and "North Pole-9" research drifting stations in 1960-1961.] Materialy nabliudeniinauchno-issledovatel'skikh dreifuiushchikh stantsii "Severnyi polius-8" i "Severnyi polius-9" 1960-1961 goda. Moskva, Izd-vo "Transport," 1964. 589 p. (Leningrad. Arkticheskii i Antarkticheskii nauchno-issledovatel'ski institut. Trudy, vol. 261).

LUKINYKH, N.A.; LIPMAN, B.L.; LUTSENKO, G.N.; ZHDANOVA, T.M.; KAZAROVETS, N.M.; FILATOVA, N.P.

Effect of alkyl sulfonate and alkylaryl sulfonates on the biochemical processes of waste water purification. Nauch. trudy AKKH no.20:124-141 '63. (MIRA 18:12)

LUKINYKH, N.A., kand. tekhn. nauk; RAZUMOVSKIY, E.S., kand. tekhn. nauk; KAZAROVETS, N.M., inzh.; ZHDANOVA, T.M., inzh.; ARTEMENKO, V.D., inzh.

Removal of synthetic surface-active agents from the waste water in aeration tanks. Vod. i san. tekh. no.9:5-8 S '65. (MIRA 18:9)

MASLENNIKOV, N.A.; ZHDANOVA, T.M.

Concentration of digested sludge by elutration and conditions for using this method. Sbor. nauch. rab. AKKH no.6:171-198 '61.
(MIRA 15:3)

(Sewage--Purification)

MASLENNIKOV, N.A.; ZHDANOVA, T.M.

Concentration of excess activated sludge by electrolytic flotation. Sbor. nauch. rab. AKKH no.6:230-253 '61. (MIRA 15:3)
(Sewage--Purification)

ZHDANOVA, T.S.

Device for studying the temperature balance in a beehive. Vop. ekol. 4:105-106 '62. (MIRA 15:11)

1. Tatarskaya respublikanskaya gosudarstvennaya sel'skokhozyaystvennaya opytnaya stantsiya, Kazan'.
(Temperature—Measurement)

[illegible]

ACCESSION NR: A[illegible]40449 [illegible]

AUTHOR: [illegible]avitskiy, A. P., Zasanova, I. V. [illegible]

TITLE: [illegible] of the [illegible] multiple pressing

SOURCE: [illegible]

[illegible]

[illegible]

[illegible]

[illegible] the Enclosure shows the [illegible]

Card 2/6

[illegible]

[illegible]

[illegible]

[illegible]

It thus seems that sintered copper after multiple pressing [illegible]

and that a low sintering temperature [illegible]

porosity [illegible] art. has 4 figures.

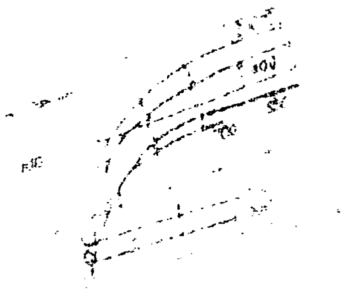
[illegible] Shtrskiy [illegible] scientific research institute for physics [illegible]

[illegible] 12Mar63

[illegible]

Card [illegible]

ACCESSION NR: AP4044911



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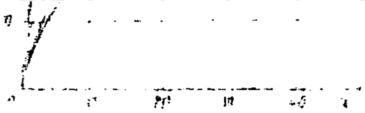
ACCESSION [illegible] AP40[illegible]

[illegible]



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ACCESSION NR: AP4047346 S/0139/64/000/005/0034/0037

S/139/62/000/006/010/032
E073/E335

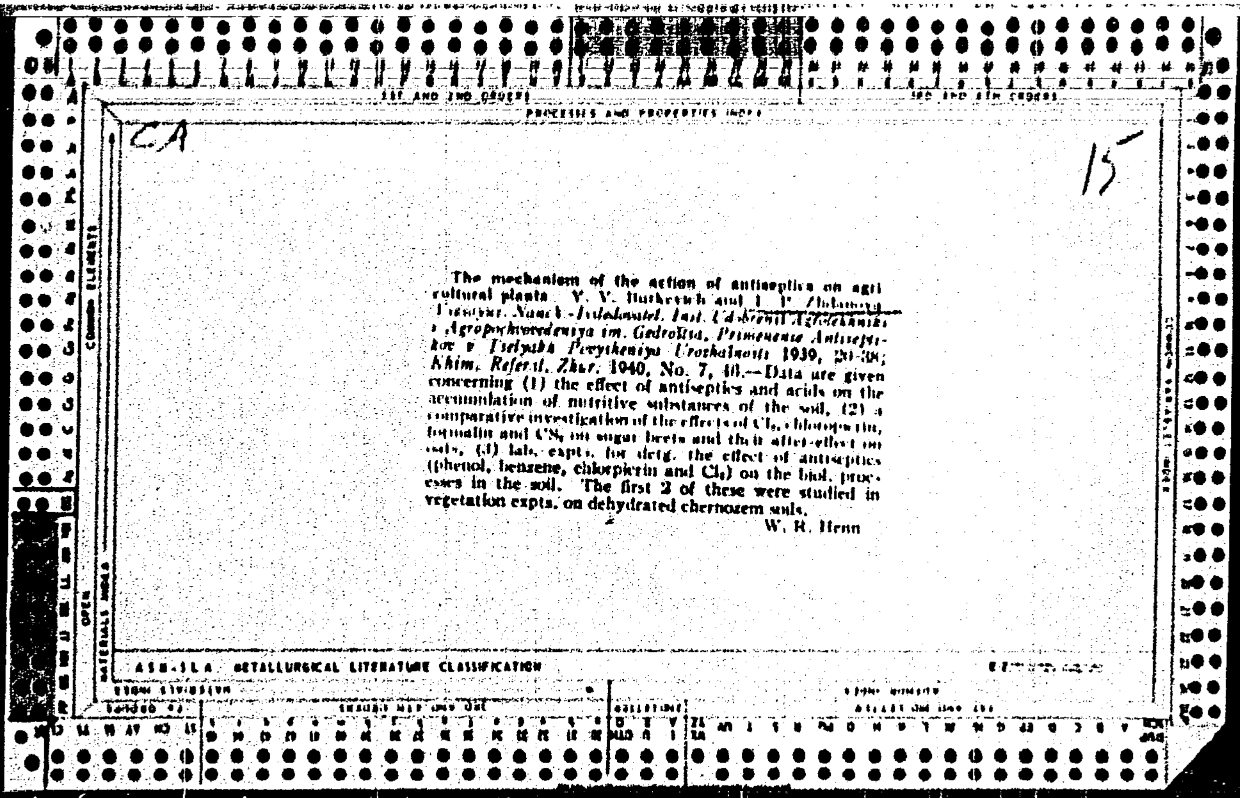
AUTHORS: Savitskiy, K.V., Zhdanova, V.N., Savitskiy, A.P., Kulikov, V.A. and Maslovskaya, T.I.

TITLE: The relationship between the mechanical properties and the porosity of copper produced from powder

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 6, 1962, 57 - 63

TEXT: The hardness and the compression strength in the as-sintered state and after deformation of 10, 20, 30% (for compression strength) and 50% (for hardness) were determined on cylindrical samples of 1-6% porosity, 12-15 mm high, 7 mm in diameter, prepared from powder passed through a sieve with a 50-μ mesh. The hardness-porosity and compressive strength-porosity curves pass through maxima for about 2.4% porosity and both the hardness and compressive strength were the higher the higher the degree of deformation. The hardness of all the samples was equal to or greater than that of cast copper, which could be explained by the existence of fine micropores formed as a result of powder-metallurgical preparation. X-ray diffraction photographs

Card 1/2


1ST AND 2ND ORDERS
3RD AND 4TH ORDERS
PROCESSES AND PROPERTIES INDEX
COMMON ELEMENTS
MATERIALS INDEX
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

15

The mechanism of the action of antiseptics on agricultural plants. V. V. Butkevich and I. P. Zhdanova. Trudy Nauch.-Issledovatel. Inst. Udobrenii Agrotekhniki i Agropochvovedeniya im. Gedroitsa, Primenenie Antiseptikov v Tselyakh Povysheniya Urozhainosti 1939, 20-38; Khim. Referat. Zhur. 1940, No. 7, 40.—Data are given concerning (1) the effect of antiseptics and acids on the accumulation of nutritive substances of the soil, (2) a comparative investigation of the effects of Cl_2, chloropicrin, formalin and CS_2 on sugar beets and their after-effect on soils, (3) lab. expts. for detg. the effect of antiseptics (phenol, benzene, chlorpicrin and Cl_2) on the biol. processes in the soil. The first 2 of these were studied in vegetation expts. on dehydrated chernozem soils.

W. R. Henn

ZHDANOVA, T. P.
V. V. BUTKEVICH, Chemisation Socialist. Agr. (USSR) 6, No. 9,
76-86, 1937

USSR/Farm Animals. Honey Bee. Q

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16881.

Author : Zhdanova T.S.
Inst : The Tatar Experimental Station of Farming, Kazan'.
(Tatarskaya s.-kh. opytnaya stantsiya, Kazan')
Title : The Temperature of the Bee Nest in the Two-Storeyed Hive.
(Temperatura pchelinogo gnezda v dvukhkorpusnom ul'ye)

Orig Pub: Pchelovodstvo, 1957, No 6, 23-28.

Abstract: The isotherms and temperature curves obtained with the aid of thermocouples at different points of the hive provide ground for the conclusion that the thermal conditions in the two-storeyed hive are favorable both for the evaporation of the nectar during day time and for creating conditions of longer life for the bees.

Card : 1/1

MOSHKOVSKIY, Yu.Sh.; POLYAKOVA, V.V.; Prinimala uchastiye: ZHDANOVA, V., praktikantka

Hypochromia of cyanin dye in nucleic acid solution. Biofizika 9 no.4:526-527 '64. (MIRA 18:3)

1. Institut khimicheskoy fiziki AN SSSR, Moskva (for Moshkovskiy, Polyakova). 2. Kafedra vysokomolekulyarnykh soyedineniy khimicheskogo fakul'teta Moskovskogo gosudarstvennogo universiteta (for Zhdanova).

SVESHNIKOV, P.; ZHDANOVA, V., inzh.

In primary organizations of the All-Union Society of Inventors and Efficiency Promoters. Izobr. i rats. no.9:19 S '59.
(MIRA 13:1)

1. Predsedatel' Stavropol'skogo krayevogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Sveshnikov).
2. Turkmenskiy respublikanskiy sovet Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov, g. Ashkhabad (for Zhdanova)
(Efficiency, Industrial)

IL'INA, A.N.; ZHDANOVA, V.D.; MOSHKOVSKIY, Yu.Sh.; MIRLINA, S.Ya.

Effect of trivalent iron ions on physicochemical properties of native deoxyribonucleic acid solutions. Biofizika 10 no.6:929-934 '65. (MIRA 19:1)

1. Institut khimicheskoy fiziki AN SSSR, Moskva. Submitted April 8, 1965.

KOLPAKOV, M.G.; ZHDANOVA, V.G., student; SHUSHPANNIKOVA, O.V., student
(Novosibirsk)

Effect of heparin on anaphylaxis. Pat.fiziol. i eksp.terap.
3 no.2:69 Mr-Ap '59. (MIRA 12:6)

1. Iz kafedry patologicheskoy fiziologii (zav. - dotsent G.L. Lyuban) Novosibirskogo meditsinskogo instituta.
(ALLERGY, exper.
anaphylaxis. eff. of heparin in rabbits (Rus))
(HEPARIN, eff.
on anaphylaxis in rabbits (Rus))

SOV/137-58-10-21532

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 154 (USSR)

AUTHORS: Zhdanova, V. N., Savitskiy, A. P., Stolyarova, V. N.

TITLE: Temperature Stability of Distortions in Copper and its Alloys (Temperaturnaya ustoychivost' iskazheniy v medi i yeye splavakh)

PERIODICAL: Dokl. 7-y Nauchn. konferentsii, posvyashch. 40-letiyu Velikoy Oktyabr'sk. sots. revolyutsii. Nr 2. Tomsk, Tomskiy un-t, 1957, p 60

ABSTRACT: Temperature stability of distortions in Cu and in Cu-Al, Cu-Zn, and Cu-Ni alloys was studied by means of X-ray diffraction analyses and measurements of microhardness. Temperature intervals for primary recrystallization were established. The energy of activation of recrystallization process was calculated from X-ray diffraction-pattern data obtained in investigations of the initial recrystallization. The rate of progress of softening of the alloys was computed from data obtained by microhardness measurements of specimens after the latter had been annealed at different temperatures. A fastest rate of softening was observed in the Cu-Zn alloy. Isothermal recovery curves were plotted for Cu and its alloys. Z.F.

1. Copper--Deformation 2. Copper--Temperature factors 3. Temperature--Stability

Card 1/1

S/123/59/000/010/036/068
A004/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 10, p. 121,
38102

AUTHORS: Zhdanova, V. N., Yakubenya, M. P. 18

TITLE: Investigating the Structure of Metallic Coatings on Ceramics 15

PERIODICAL: Tr. Sibirsk. fiz.-tekhn. in-ta, 1958, No. 36, pp. 145-151

TEXT: Bibliographic entry ✓

Card 1/1

ZHDANOVA, V.N.

PHASE I BOOK EXPLOITATION SOV/4502

Akademiya nauk SSSR. Nauchnyy sovet po probleme zharoprochnykh splavov

Issledovaniya po zharoprochnym splavam, tom 6 (Investigations of Heat-Resistant Alloys, Vol. 6) Moscow, 1960. 319 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A. A. Baykova. Nauchnyy sovet po probleme zharoprochnykh splavov.

Editorial Board: I. P. Bardin (Deceased) Academician, G. V. Kurdyumov, N. V. Ageyev, Corresponding Member, Academy of Sciences USSR (Resp. Ed.), I. A. Oding, I. M. Pavlov, and I. F. Zudin, Candidate of Technical Sciences; Ed. of Publishing House: V. A. Klimov; Tech. Ed.: S. G. Tikhomirova.

PURPOSE: This book is intended for research workers in the field of physics of metals and for metallurgists, particularly those working on heat-resistant alloys.

COVERAGE: This collection of 45 articles deals with various problems in the production of heat-resistant alloys. Special attention is paid to the mechanisms of deformation of such metals as aluminum, copper, iron, and nickel. Various defects and failures of metals are analyzed, and means for increasing the heat-resistance and plasticity are described. Among the special problems discussed are: electrolytic conductivity of iron-aluminum alloys in the solid state; the mobility of atoms in nickel-iron alloys, depending upon defects of their crystalline structure; the kinetics of change in isolated pores; the irreversible thermal transformation of solid bodies, etc. No personalities are mentioned. References follow each article.

Dekhtyar, I.Ya. Influence of the Defects of Crystalline Structure on the Energy of Creep Activation 29

Kuznetsov, V.D., and A.I. Loskutov. Influence of Temperature and Degree of Prior Deformation on the Plasticity of Aluminum and Copper 34

Popov, L.Ye., G.L. Karpov, and N.A. Aleksandrov. The Mechanism of the Saltatory Deformation in Alloys 38

Kuznetsov, V.D., K.V. Savitskiy, and M.P. Zagrebennikova. Effect of the Dispersability of CuAl2 Particles on the Temperature-Velocity Ratio of the Mechanical Properties of Duralumin Under Compression 49

Kuznetsov, V.D., K.V. Savitskiy, N.N. Sukharina, V.N. Zhdanova, G.V. Toporov, and A.P. Savitskiy. Effect of Temperature Variation and Strain Rate on the Properties of Steels With Different Dispersability of Carbide Inclusions 56

Osyukin, M.G., and V.A. Pavlov. Dependence of Nickel-Copper Alloy Creep Upon the Concentration of Solid Solution and Deformation Conditions 64

Sukhovarov, V.F. Equivalent Influence of Deformation Temperature and Strain Rate Upon the Flow Curves of Copper and Nickel 71

Oding, I.A., and V.V. Burdukskiy. Effect of Variable Stress Conditions on the Endurance of Steel 77

Oding, I.A., and V.N. Geminov. Mechanism of Metal Recovery in Creep Under Elevated Temperature Conditions 89

Gertsriken, S.D., and M.P. Pryanishnikov. Self-Diffusion in Iron and Its Alloys With Aluminum in the High-Temperature γ -Region 95

Gertsriken, S.D., I.Ya. Dekhtyar, V.S. Mikhalenkov, and N.G. Nabatova. Investigation of Electrolytic Conductivity of Iron-Aluminum Alloys in Solid State 99

Gertsriken, S.D., and N.N. Novikov. Relationship Between Dislocation Density, Thermal E.M.F., and Hardness 105

Kuz'menko, P.P., and Ye.I. Khar'kov. Experimental Determination of the Charges of Components in Scale-Resistant Alloys of Fe—Al System 112

Dekhtyar, I.Ya., and V.S. Mikhalenkov. Effect of Nonequilibrium Defects of Crystalline Structure on the Mobility of Atoms in Nickel-Iron Alloys 120

Nemnonov, S.A., V.V. Nemoshkalenko, and A.M. Nafar. Effect of Nickel Concentration on the Structure of the Energy Spectrum of Chromium and Iron Electrons 130

Smirnov, A.A., and Yu.A. Tikhonova. Investigation of Geometric Distortions of the Crystalline Lattice of an Alloy According to the Scattering of X-rays and Thermal Neutrons 136

3/

ACCESSION NR: AP4036566 S/0139/64/000/002/0110/0115

AUTHORS: Savitskiy, A. P.; Itin, V. I.; Zhdanova, V. N.; Kozlov, Yu. I.

TITLE: On problem of excess vacancy sources formed during sintering of metallic powders

SOURCE: IVUZ. Fizika, no. 2, 1964, 110-115

TOPIC TAGS: metallic powder, sintering, cake porosity, initial porosity

ABSTRACT: An experimental investigation was made to verify theoretical conclusions on the influence of the heating rate in metallic powder sintering. Copper powder (50 μ size) of galvanic origin was used to prepare 15- to 20-mm cylindrical specimens (7 mm in diameter) in a double-sided press. The sintering was carried out in 5×10^{-3} Hg vacuum at a temperature of 900C for one hour. One set of specimens was heated at an average rate of 1.5 degrees per minute and the other at 200 degrees per minute. A graph (depicting final cake porosity versus initial porosity for both heating rates) and 170-magnification photographs of the pore sizes in the two specimens show that for small initial porosity under elevated pressures the use of slow heating rates to sintering temperatures gives rise to a

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ACCESSION NR: AP4036566

smaller expansion in the cakes than fast heating rates. Similarily, high heating rates generate larger pore sizes than slow heating rates. The results confirm the authors' predictions of diffusion mechanisms governing sintering porosity in crystalline materials. Orig. art. has: 3 formulas and 2 figures.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuyby*sheva (Siberian Physicotechnical Institute at Tomsk State University)

SUBMITTED: 01Mar63 DATE ACQ: 05Jun64 ENCL: 00

SUB CODE: MM NO REF SOV: 012 OTHER: 003

Card 2/2

[illegible]

[illegible]

[illegible]

[illegible] temperatures

[illegible]

[illegible]

[illegible] compression [illegible]

[illegible] compression [illegible] and 600C, metal-ceramic copper
Obtained by triple pressing [illegible]

the small pores [illegible]

SAVITSKIY, A.P.; ZHDANOVA, V.N.; GIRYA, E.N.

Effect of the sintering temperature on the strength of powder copper under the effect of repeated pressing. Porosh.met. 4 no.4:58-64 Jl-Ag '64. (MIRA 18:8)

1. Sibirskiy fiziko-tekhnicheskiy nauchno-issledovatel'skiy institut.

L 2099-66 EWP(e)/EWT(m)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) IJP(c) JD/HW

ACCESSION NR: AP5022547 UR/0226/65/000/009/0081/0090

AUTHOR: Grigor'yeva, V. V.; Savitskiy, K. V.; Zhdanova, V. N.; Kulikov, V. A.; Sergeyenkova, V. M.; Savitskiy, A. P.; Itin, V. I.; Kozlov, Yu. I.

TITLE: Resistance to deformation and stability of deformation-induced distortions of sintered powder alloys

SOURCE: Poroshkovaya metallurgiya, no. 9, 1965, 81-90

14 68 B

TOPIC TAGS: sintered nickel alloy, aluminum oxide containing alloy, dispersion strengthened alloy, alloy deformation resistance, deformation induced distortion, distortion stability, alloy microhardness

ABSTRACT: Compacts of powders of pure nickel and nickel with 1, 3, and 5% of α-Al_2O_3 or γ-Al_2O_3 were sintered at 1200—1400C in a hydrogen atmosphere and tested for compressive strength under compression at a rate of 0.15 mm/min with a reduction of up to 30% at 20 and 500C. The stability of deformation-induced distortions was investigated by measurements of the microhardness of specimens vacuum annealed in the 200—1050C range. The room-temperature compressive strength of sintered nickel alloys with up to 5% Al_2O_3 was slightly higher than that of pure sintered nickel, and the difference was somewhat greater at 500C. At both test temperatures,

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ACCESSION NR: AP5022547

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the compressive strength was higher in alloys containing α-Al_2O_3 and slightly increased in all alloys as the Al_2O_3 concentration increased. The size of Al_2O_3 particles had practically no effect on the room-temperature compressive strength, but at 500C the compressive strength of alloys increased appreciably as the particle size of Al_2O_3 decreased from 2 to 1 μ. The type of Al_2O_3 modification had the most sharply pronounced effect on the compressive strength. For example, an alloy with 3% α-Al_2O_3 had a compressive strength of about 65 and 36 dan/mm^2 at 20 and 500C, respectively, compared with 58 and 28 dan/mm^2, respectively, for an alloy with 3% γ-Al_2O_3. Low-temperature annealing (at up to 300—400C) produced an equally slight increase in the hardness of both nickel and Ni-Al_2O_3 alloys deformed 30% at 20C. Annealing at temperatures higher than 400C decreased the hardness of sintered nickel and all Ni-Al_2O_3 alloys. However, the hardness of cold-deformed Ni-Al_2O_3 alloys after high-temperature annealing remained higher than that of identically treated sintered nickel. The hardness level of Ni-Al_2O_3 alloys increased with higher content and fineness of Al_2O_3 powder. The maximum softening of Ni and Ni-γ Al_2O_3 alloys occurred at the same temperature, while the temperature of maximum softening of Ni-α Al_2O_3 alloys was about 100C higher. The higher temperature stability of the deformation-induced distortions and a higher compressive

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ACCESSION NR: AP5022547

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strength at room and elevated temperatures favor the use of sintered Ni-α Al_2O_3 alloys. Orig. art. has: 8 figures and 5 formulas. [MS]

ASSOCIATION: Institut problem materialovedeniya AN UkrSSR (Institute of Problems of the Science of Materials, AN UkrSSR); Sibirskiy fiziko-tekhnicheskiy institut im. V. D. Kuznetsova (Siberian Physicotechnical Institute)

SUBMITTED: 02Feb65

ENCL: 00

SUB CODE: MM

NO REF SOV: 006

OTHER: 014

ATD PRESS: 4113

Card 3/3

SAVITSKIY, A.P.; ITIN, V.I.; ZHDANOVA, V.N.; KOZLOV, Yu. I.

Sources of excess vacancies forming in the sintering of powdered metals. Izv. vys. ucheb. zav.; fiz. no. 2:110-115 '64.
(MIRA 17:6)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

SAVITSKIY, K. V.; ZHDANOVA, V. N.; SAVITSKIY, A. P.; KULIKOV, V. A.;
MASLOVSKAYA, T. I.

Mechanical properties of powdered copper as dependent on its porosity. Izv. vys. ucheb. zav.; fiz. no.6:57-63 '62.
(MIRA 16:1)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

(Powder metallurgy) (Copper)

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 222 (USSR) SOV/137-58-11-23398

AUTHOR: Zhdanova, V. N.

TITLE: An Investigation of the Softening Process of Cold-drawn Tin Occurring Under Load (Issledovaniye razuprochneniya volochennogo olova pod nagruzkoy)

PERIODICAL: V sb.: Issled. po fiz. tverdogo tela. Moscow, AN SSSR, 1957, pp 170-173

ABSTRACT: A presentation of the results of qualitative X-ray studies of the structure of Sn specimens the elongation of which was accompanied either by an increase or a reduction of the true stress (S). The specimens were prepared by means of extruding the metal through a die followed by drawing until a diameter of 1.8 mm was obtained. The specimens were elongated by 25-30% on a Polyáni device; one portion of the specimens was subjected to a preliminary anneal prior to this operation, whereas the other portion was elongated immediately after drawing without preliminary annealing. Two series of specimens, commercially pure Sn and Sn of the 01 type, were investigated by means of X-ray studies. The X-ray pictures were taken in a

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SOV/137-58-11-23398

An Investigation of the Softening Process of Cold-drawn Tin (cont.)

cylindrical chamber 57.3 mm in diameter under the Cu-K_{α} emission of a vacuum tube. For this purpose the specimens were cut from three different sections of an elongated wire which were at a sufficient distance from the clamped ends as well as from the region of necking. It is shown that secondary deformation of drawn Sn is accompanied by an intensive relief of internal S culminating in a final process of recrystallization. An analogous situation is observed in the case of pure Sn which had been hardened by means of cold drawing: In the process of elongation of the specimen the recovery process is so intense that, in addition to the relief of internal stresses, recrystallization occurs throughout the entire volume of the specimen. In order to determine the effect of natural recovery on the structure of the Sn, all specimens were subjected to an X-ray analysis after having been allowed to age at room temperature for a six-month period. In this instance, however, the intensity of the processes of stress relief and recrystallization was considerably less intense. Thus, a comparison between the data of mechanical tests and the results of structural studies substantiated the assumption that external S have a stimulating effect on the recovery processes occurring in Sn which had been hardened by means of drawing.

V. N.

Card 2/2

ZHDANOVA, V.N.; SAVITSKIY, A.P.; STOLYAROVA, V.I.

X-ray analysis of the temperature stability of defects in deformed copper and its alloys. Izv. vys. ucheb. zav.; fiz. no.2:15-22 '58. (MIRA 11:6)

1.Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V. Kuybysheva.
(Copper alloys--Testing)
(Metals, Effect of temperature on)

ZHDANOVA, V. N.

[redacted]

"X-ray Study of Structural Defects in Metals Due To the Tensile Deformation" P. 152-158, in the book Research in the Physics Solids, Moscww, Izd-vo AN SSSR, 1957. 277 p. Ed. Bol'shanina, M. A.; Tomsk Universitet, Siberskiy fiziko-tekhnicheskiy institut.

Personalities: Kurdyumov, G. V.; Kritskaya, V. K.; Il'ina, V. A.; Lysak, L. I.; and Vasil'yev, L. T.; and Umanskiy, Ya. S. Materials tested: aluminum, copper, and nickel. There are 3 figures, 1 table, and 7 Soviet references.

This collection of articles is meant for metallurgical physicists and for engineers of the metal-working industry. This book contains results of research in the field of failure and plastic deformation of materials, mainly of metals. Problems of cutting, abrasion, friction, and wear of solid materials (metals) are discussed.

ZHDANOVA, V. N.

"Study of the Softening of Drawn Tin Due to Applied Load" p. 170-173, in the book Research in the Physics Solods, Moscow, Izd-vo AN SSSR, 1957. 277 p. Ed. Bol'shanina, M. A.; Tomsk Unvversitet, Siberskiy fiziko-tekhnicheskiy institut.

Personalities: Oding, I. A.; Kulikov, F. V.; Makagon, M. B.; Legkova, M. L.; and Tabatarovich, A. K. Material Studied: tin 01 and commericial tin. There are 2 figures and 2 Soviet references.

This collection of articles is meant for metallurgical physicists and for engineers of the metal-working industry. This book contains results of research in the field of x failure and plastic deformation of x materials, mainly of metals. Problems of cutting, abrasion, friction, and wear of solid mateirails (metals) are discussed.

SAVITSKIY, K.V.; ZHDANOVA, V.N.; SAVITSKIY, A.P.; KULIKOV, V.A.

Hardening of metals by dispersed particles. Issl. po zharopr. splav. 9:119-126 '62. (MIRA 16:6)

(Metals—Hardening)

66984

SOV/81-59-13-46465

18.6100

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 13, p 306 (USSR)

AUTHORS: Zhdanova, V.N., Yakubenya, M.P.

TITLE: The Investigation of the Structure of Metal Coatings on Ceramics

PERIODICAL: Tr. Sibirsk. fiz.-tekhn. in-ta, 1958, Nr 36, pp 145 - 151

ABSTRACT: Data are cited on the roentgenographic investigation of the structure of metal coatings on ceramics. According to present concepts, in the sintering of ceramics with metal the formation of solid solutions (SS) takes place which ensures the cohesion between the metal coatings with the ceramics. Three types of SS are distinguished: substitutional, interstitial and deduction. In the formation of substitutional SS the dissolution of the elements with a smaller atomic radius than that of the solvent causes a reduction of the lattice parameter, but at the opposite relation, its increase. Interstitial SS are characteristic for the cases of dissolution of non-metals in a metal, the lattice parameters in this case always increases. SS of deduction are formed only on the base of chemical compounds, the parameters of the crystal lattice decreases in this case. The investigation was carried out on ceramic

4

Card 1/2

40982

S/659/62/009/000/016/030
I003/I203

AUTHORS: Savitskiy, K. V., Zhdanova, V. N., Savitskiy, A. P. and Kulkov, V. A.

TITLE: On strengthening of metals by dispersed particles

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam. v. 9. 1962. Materialy Nauchnoy sessi po zharoprochym splavam (1961 g.), 119-126

TEXT: The above subject has recently been widely investigated. In the present work the crystalline structure of a deformed sintered Cu-Al_2O_3 alloy was investigated by mechanical tests and by X-ray analysis. It is concluded that in the Cu-Al_2O_3 system in which the Al_2O_3 particles are practically insoluble, the mean dimensions of the blocks of the mosaic structure are smaller the higher the concentration of the strengthening phase, and the samller the dimensions of its particles. The production of heat-resistant metals with a high degree of hardness and high melting points which contain fine insoluble inclusions is very promising. In the discussion, A. Ya. Shinyayev suggested that the diffusion of such oxide inclusions in metals should be investigated, and thus throw light on the possible use of this method for the production of heat-resistant alloys. V. V. Grigor'yeva stressed that great attention should be paid to the problems discussed in the present article. There are 4 figures and 1 table.

Card 1/1

GRIGOR'YEVA, V.V.; SAVITSKIY, K.V.; ZHDANOVA, V.N.; KULIKOV, V.A.;
SERGEYENKOVA, V.M.; SAVITSKIY, A.P.; ITIN, V.I.; KOZLOV, Yu.I.

Strain resistance and resistance to deformational distortions of ceramic metal alloys. Porosh. met. 5 no.9:81-90 S '65.
(MIRA 18:9)

1. Institut problem materialovedeniya AN UkrSSR i Sibirskiy fiziko-tekhnicheskiy institut imeni Kuznetsova.

ZHDANOVA, V.S., zaveduyushchaya.

Establishing a network of public libraries in Moscow. Gor.khoz.Mosk. 27 no.10:21-23 O '53. (MLRA 6:11)

1. Gorodskoy bibliotechnyy metodicheskiy kabinet.
(Moscow--Libraries) (Libraries--Moscow)

DROZDOVA, Ye.I.; ORKINA, Z.G.; SVETOZAROVA, O.I.; ZHDANOVA, V.V.; MEL'NIKOVA, N.P.; OVSYANNIKOV, P.V.

Refining of the intermediate distillate fractions of thermal cracking. Trudy GrozNII no.4:142-156 '59. (MIRA 12:9)
(Petroleum--Refining)

20790

S/181/61/003/003/015/030
B102/B205

26.2532

AUTHORS: Brach, B. Ya., Zhdanova, V. V., and Lev, Ye. Ya.

TITLE: Thermoelectric properties of the system HgSe - HgTe

PERIODICAL: Fizika tverdogo tela, v. 3, no. 3, 1961, 786-789

TEXT: The system HgSe - HgTe, which has very interesting thermoelectric properties, has so far been investigated very insufficiently, and the published data are contradictory because the system probably contained also free Hg. A very detailed study has now been made of the thermoelectric properties of very carefully prepared samples which contained no unreacted Hg any longer. Hg of the type P-1 (R-1) with a purity of 99.999%, Se with a purity of 99.999% produced by the factory "Krasnyy khimik", and bidistilled Te were used for the synthesis. The latter contained Al and Pb impurities which had been detected by spectrum analysis. The pure elements were fused in quartz ampoules (HgTe~660°C, HgSe~790°C). To obtain a complete reaction, the melts were kept at 500°C for 100 hr, after which no free Hg was found any longer. Specimens of a size of 0.8 - 0.9 cm^2 · 25 mm were subjected to a homogenizing heat treatment (200°C, 200 - 300 hours). Subsequently, they

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B102/B205

Thermoelectric properties ...

were subjected to X-ray and microstructural analyses. The electrical conductivity σ, the thermo-emf α, and the Hall constant R of these specimens at room temperature were measured. Results: A study of the dependence of σ on the composition of the system has shown that σ has a broad maximum at a concentration of 50:50. α was found to be a linear function of the concentration; it changes from -95 $\mu v/^{\circ}C$ (HgSe) to -115 $\mu v/^{\circ}C$ (HgTe). This low value of α indicates either a nearly stoichiometric composition or degeneracy. A study of the deviation of the curve $\alpha = f(\log n)$ from the theoretical one shows that there exists a partial degeneracy. Taking the latter into account, the authors calculated the carrier concentration (n) from the Hall constant. Fig. 4 illustrates the dependence of carrier concentration and carrier mobility (u) on the composition. u had been calculated from R and σ. Whereas n is almost equal for both pure HgSe and pure HgTe, u is 20,000 for pure HgSe, and 22,900 $cm^2/v\cdot sec$ for pure HgTe. The absence of a λ-point is indicative of the absence of a hyperstructure. Many specimens which had not been subjected to heat treatment, showed anomalously high values of u (at $n \sim 3.1-3.9\cdot10^{17}cm^{-3}$): 28,000 $cm^2/v\cdot sec$ for 93% HgSe + 7% HgTe, 31,000 $cm^2/v\cdot sec$ for 80% HgSe + 20% HgTe, 32,000 $cm^2/v\cdot sec$ for 30% HgSe + 70% HgTe. Fig. 5 shows $u = f(\log n)$ for specimens of different compositions.

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Thermoelectric properties ...

The anomalous course of curves 2 and 5 can be ascribed either to a nearly stoichiometric composition or to the effect of impurities. It is known that the effective carrier masses for HgSe and HgTe are very small. The values calculated for different compositions (1) in mole% are listed in a table. The authors thank A. R. Regel' for his interest in the work, and L. S. Stil'bans and B. P. Mitrenin for discussions. Ye. I. Nikol'skaya is mentioned. A. I. Zaslavskiy and T. B. Zhukova carried out the X-ray structural analyses. There are 5 figures, 1 table, and 17 references: 10 Soviet-bloc and 7 non-Soviet-bloc.

ASSOCIATION: Institut poluprovodnikov AN SSSR Leningrad (Institute of Semiconductors, AS USSR, Leningrad)

SUBMITTED: July 8, 1960

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20790

S/181/61/003/003/015/030
B102/B205

Thermoelectric properties ...

Figs. 4 and 5

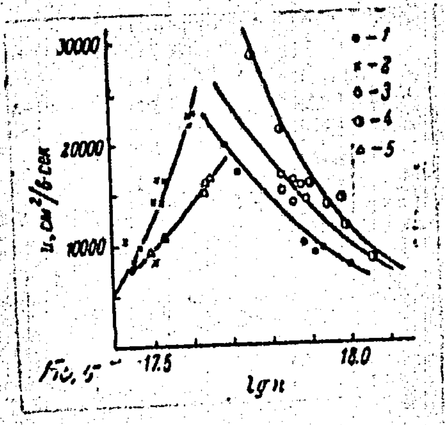

Fig. 5

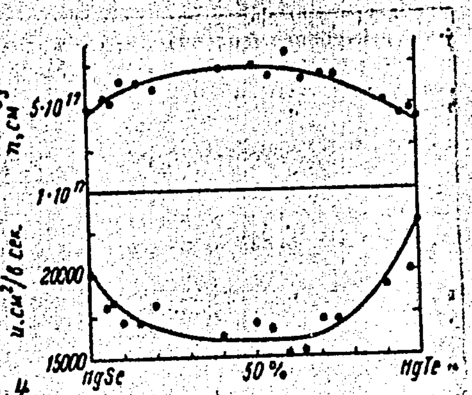

Fig. 4

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Thermoelectric properties ...

TABLE

① Состав, мол. %		$\frac{m^*}{m_0}$	① Состав, мол. %		$\frac{m^*}{m_0}$
HgSe	HgTe		HgSe	HgTe	
100	—	0.030	45	55	0.044
95	5	0.036	35	65	0.045
93	7	0.038	30	70	0.042
90	10	0.040	25	75	0.044
85	15	0.039	20	80	0.040
80	20	0.039	10	90	0.037
70	30	0.040	5	95	0.035
60	40	0.044	2	98	0.037
50	50	0.046	—	100	0.033

Card 5/5

ACC NR: AP7002396 SOURCE CODE: UR/0363/66/002/012/2103/2109

AUTHOR: Shelimova, L. Ye.; Abrikosov, N. Kh.; Zhdanova, V. V.; Sizov, V. V.

ORG: Institute of Metallurgy im. A. A. Baykov, Academy of Sciences, SSSR (Institut metallurgii Akademii nauk SSSR)

TITLE: Study of the systems PbSe-GeSe and GeSe-GeTe

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 12, 1966, 2103-2109

TOPIC TAGS: lead compound, selenide, telluride, germanium compound, phase transition

ABSTRACT: The phase equilibria and solid solutions in the systems PbSe-GeSe and GeSe-GeTe were studied by thermal, microstructural, x-ray and dilatometric analyses in the 20-620°C range. It was found that the PbSe-GeSe system is not a quasi-binary section of the ternary system Ge-Pb-Se. The polythermal section of GeSe-GeTe showed the existence of a continuous series of solid solutions at temperatures near the solidus. Phase transformations at low temperatures connected with the polymorphism of GeSe and GeTe were investigated, and the boundaries of solid solutions were determined in both systems. Orig. art. has: 7 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 25Dec65/ ORIG REF: 003/ OTH REF: 007

546.815'231+546.289'231
UDC: 546.289'231+546.289'241

Card 1/1

L 36150-66 EWP(t)/ETI IJP(c) RDW/JD

ACC NR: AP6018342 SOURCE CODE: GE/0030/66/013/001/K019/K022 44

1/2

AUTHOR: Zhdanova, V. V.; Lukina, V. I.; Novikova, S. I. B

ORG: Institute of Semiconductors, Academy of Sciences of the UkrSSR, Leningrad

TITLE: Thermal expansion of the HgSe in the 50—500-K temperature range

21

SOURCE: Physica status solidi, v. 13, no. 1, 1966, K19-K22

TOPIC TAGS: thermal expansion, polycrystal, thermal acoustic effect, mercury compound, mercury selenide, SELENIDE

ABSTRACT: The thermal expansion coefficient of mercury selenide which crystallizes in the zinc-blende lattice has been measured in the 20—500-K temperature range. A quartz dilatometer, an OP-I type recorder (V. V. Zhdanova, Fiz. tverd. Tele 5, 3341, 1963), and Strelkov's dilatometer (P. G. Strelkov and S. I. Novikova, Prib. Tekhn. Eksper., No.5, 105, 1957) have been used. The results obtained with these devices were in good agreement within the limits of experimental error. Measurements have been carried out on two polycrystalline

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L 36150-66 2

ACC NR: AP6018342

and two monocrystalline HgSe samples. The concentrations of free carriers in the polycrystals and one monocrystal were determined from Hall measurements at the room temperature and were found to be 4×10^{17}— 1×10^{18} cm^{-3}. The second monocrystalline sample was doped with Al, and its concentration of free carriers was 4.8×10^{19} cm^{-3}. The temperature dependence of the thermal-expansion coefficient of HgSe is characteristic for all substances having a diamond-type lattice. The transition temperature of the thermal-expansion coefficient of HgSe to negative values was found to be very high. Negative values of the thermal-expansion coefficient are caused by the increased role of transverse acoustic vibrations at low temperatures. The behavior of the thermal-expansion coefficient must be taken into consideration when investigating semiconductor characteristics of HgSe. The authors thank S. Aliev and S. S. Shalyt for providing monocrystalline samples. Orig. art. has: 1 figure. [NT]

SUB CODE: 20/ SUBM DATE: 26Nov65/ ORIG REF: 005/ OTH REF: 002

Card 2/2

AMERIK, B.K.; NIKOLAYEVA, V.G.; SVETOZAROVA, O.I.; KHACHATUROVA, Z.N.
NEYMAN, L.M.; ZHDANOVA, V.V.; DROZDOVA, Ye.I.; LEVASHOVA, E.P.
PERCHENKO, A.A.; GALEYEVA, K.S.

Obtaining and testing a test sample of gas-turbine fuel derived from the contact coking of a sweet cracking residue. Trudy GrozNII no. 15:105-110 '63. (MIRA 17:5)

AMERIK, B.K.; MAYDEBOR, L.K.; SVETOZAROVA, O.I.; ROMANKOVA, I.K.;
SAPON, M.F.; MUTOVIN, Ya.G.; ZHDANOVA, V.V.; LEVASHOVA, E.P.;
GOLOVENKO, A.M.; KOZLOVA, A.S.

Refining sour mazuts. Trudy GrozNII no. 15:42-48 '63.
(MIRA 17:5)

AMERIK, B.K.; MAYDEBOR, L.K.; SVETOZAROVA, O.I.; MATAYEVA, B.V.;
ROMANKOVA, I.K.; GOLOVENKO, A.M.; SAPOON, M.F.; ZHDANOVA, V.V.
LEVASHOVA, E.P.; KOZLOVA, A.S.; ZINOV'YEV, V.R.; KONINA, V.F.;
MUTOVIN, Ya.G.

Refining sweet mazuts. Trudy GrozNII no. 15:49-58 '63.
(MIRA 17:5)

SVETOZAROVA, O.I.; ZHDANOVA, V.V.

Studying the depressing effect of tar residues on the pour point of gas-turbine fuels. Trudy GrozNII no. 15:119-126 '63. (MIRA 17:5)

SVETOZAROVA, O.I.; ZHDANOVA, V.V.; NESMEYANOVA, T.S.; LEVASHOVA, E.P.;
KOZOREZOVA, A.I.; NEMCHENKO, S.A.; MIHETS, T.M.

Studying the compsition of gasolines derived from the catalytic cracking of high-paraffin kerosene gas oil. Trudy GrozNII no. 15:344-350 '63. (MIRA 17:5)

L 23022-66 EWT(1)/EWT(m) EWP(w)/T/EWP(t) IJP(c) JD/JG

ACC NR: AP6009667 SOURCE CODE: UR/0181/66/008/003/0816/0821

AUTHORS: Kraynik, N. N.; Khuchua, N. P.; Zhdanova, V. V.; Yevseyev, V. A.

67
63
8

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Phase transitions in $BiFeO_3$

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 816-821

TOPIC TAGS: bismuth compound, antiferroelectricity, ferroelectric material, ferromagnetic material, dielectric constant, dielectric loss, temperature dependence, phase transition, Curie point, elongation

ABSTRACT: In view of the lack of unanimity on the nature of $BiFeO_3$, whether it is a weak ferromagnet, a ferroelectric, or antiferroelectric and on other unresolved questions, the authors have made more careful temperature investigations of the dielectric properties and of the relative elongation of $BiFeO_3$ over the entire available tem-

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2

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L 23022-66
ACC NR: AP6009667 3

perature range, up to that of the decomposition of $BiFeO_3$. The temperature dependence of the dielectric constant and of the loss angle were measured at 9.4×10^9 cps and the relative elongation 18 was measured in the temperature range 20 -- 880C. The samples were prepared by the usual ceramic technology. The dielectric measurements were by a standard short circuited waveguide method. The temperature dependence of the thermal expansion was measured with a dilatometer and an optimeter, or with a vacuum dilatometer. The plot of the dielectric constant with temperature was in the form of a staircase curve with many steps, each corresponding to a different phase transition and agreeing with earlier results. The strongest anomaly was observed at the highest temperature, at 840 -- 850C, which is shown to be the Curie temperature. Almost all the dielectric-constant anomalies are duplicated on the elongation curve. Although the interpretation of the data is still impossible, it is suggested that the unit cell of $BiFeO_3$ contains more than one formula unit and that neutron and x-ray diffraction research is necessary to determine the character of the electric ordering in the material. The authors thank G. A. Smolenskiy for continuous interest and G. T. Andreyev

Card 2/3

L 23022-66
ACC NR: AP6009667

for preparing the samples and A. G. Tutov for the x-ray phase analysis. Orig. art. has: 2 figures

SUB CODE: 20/ SUBM DATE: 27Jul65/ ORIG REF: 019/ OTH REF: 002

Card 3/3 Lc

L 00762-66 EWT(1)/T/EWA(h) IJP(c) AT

ACCESSION NR: AP5012591 UR/0181/65/007/005/1584/1586

55 B

AUTHOR: Zhdanova, V. V. 44,55; Kontorova, T. A. 44,55

TITLE: $C_p - C_V$ for Ge with different content of electrically active impurities

SOURCE: Fizika tverdogo tela, v. 7, no. 5, 1965, 1584-1586

TOPIC TAGS: germanium, crystal impurity, impurity center, specific heat, thermal expansion coefficient, carrier density

ABSTRACT: This is a continuation of an earlier paper by one of the authors (Kontorova, FTT v. 4, 3328, 1962), in which the hypothesis was advanced that doping of Ge and Si with electrically active impurities can lead to some increase in the numerical values of their coefficients of thermal expansion. This was confirmed by later experiments (FTT v. 5, 3341, 1963). The authors therefore calculate the difference in the specific heat $C_p - C_V$ and show that this difference depends on the density of the free carriers, which must be taken into account in various types of precision thermal measurements and calculations. The temperature dependence of the relative difference in specific heat is shown in Fig. 1 of the Enclosure. It is assumed that a similar dependence should be exhibited also by Si, α-Sn, and many semiconductor compounds with diamond-like lattice (type $A_{III}B_V$ and $A_{II}B_{VI}$). Orig. art. has: 1 figure and 2 formulas.

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L 00762-66

ACCESSION NR: AP5012591

3

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR) 44,55

SUBMITTED: 29Sep64 ENCL: 01 SUB CODE: SS

NR REF SOV: 003 OTHER: 001

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L 00762-66

ACCESSION NR: AP5012591 **ENCLOSURE: 01**

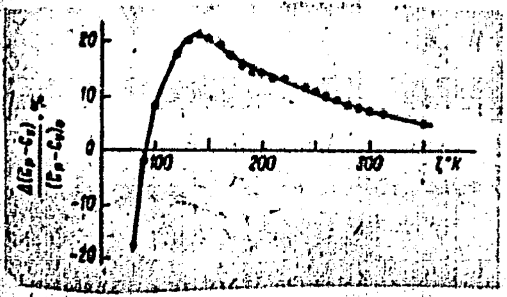

Fig. 1. Temperature dependence of $\frac{\Delta(C_p - C_v)}{(C_p - C_v)_0}$ for p-Ge.

Card 3/3

SHELIMOVA, L.Ye.; ABRIKOSOV, N.Kh.; ZHDANOVA, V.V.

The system germanium-tellurium in the region of a GeTe compound.
Zhur. neorg. khim. 10 no.5:1200-1205 My '65. (MIRA 18:6)

ZHDANOVA, V.V.

Effect of impurities on the coefficient of thermal expansion of p-Ge. Fiz. tver. tela 5 no.11:3341-3343 N '63. (MIRA 16:12)

1. Institut poluprovodnikov AN SSSR, Leningrad.

23136

S/181/61/003/004/041/042
B111/B202

24,7100 (1153,1160,1136)

AUTHOR: Zhdanova, V. V.

TITLE: Second-order phase transition in SnSe

PERIODICAL: Fizika tverdogo tela, v. 3, no. 5, 1961, 1619-1620

TEXT: When studying SnSe it was observed that at a temperature exceeding 500°C the structure of the alloy is changed. In this connection the author studied the thermal expansion coefficient of SnSe single crystals in the mentioned temperature range. The measurement was made by means of a dilatometer with vertical optical comparator as recorder. Accuracy of measurement was 0.001 mm. The single crystals were grown by the method of Bridgman. The author used specimens of a height of 0.8 - 1.0 cm and a cross section of 0.3 - 0.5 cm^2. The crystals were anneald at 650°C for two to three hours in order to obtain precise results. SnSe has an orthorhombic lattice (a=11.57, b=4.19, c=4.46 A) with a distinct layer lattice (the axes b and c lie in the cleavage plane, the axes a is perpendicular to it). Due to this fact the expansion coefficient was measured in the three directions of axes. The axes of the single crystal were determined by X-ray analysis. The figure

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Second-order phase ...

shows the curves of relative expansion along the axes a,b,c (100,010,001). It can be seen that in the cleavage plane expansion takes place along the axes b and c, along the axis c, however, compression occurs. all three curves have a sharp break at 541°C. The beginning of the break indicates a second-order phase transition at 541°C. At higher temperatures the expansion coefficients are positive in all three directions of the axes, where two of them (along a and c) are equal. It can be concluded from these results that SnSe is uniaxial at higher temperatures. [Abstracter's note: Complete translation.] There are 1 figure and 1 non-Soviet-bloc reference.

ASSOCIATION: Institut poluprovodnikov AN SSSR Leningrad
(Institute of Semiconductors AS USSR Leningrad)

SUBMITTED: December 23, 1960

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Second-order phase ...

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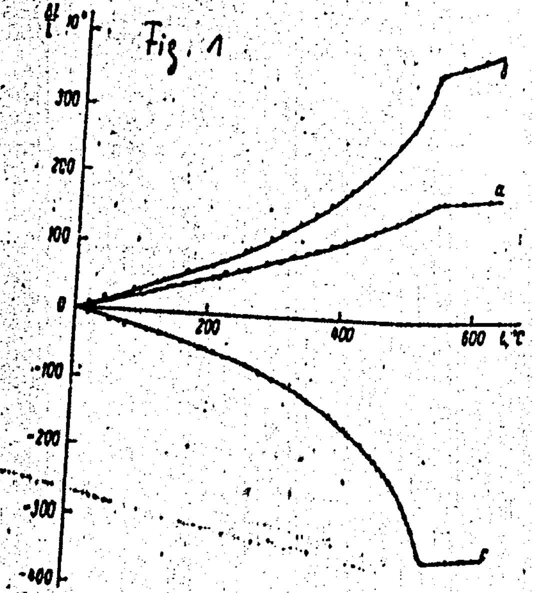
B111/B202

Fig. 1



Card 3/3

11 (2, 4) PHASE I BOOK EXPLOITATION SOV/2213

Groznyy. Neftyanoy nauchno-issledovatel'skiy institut

Khimiya i tekhnologiya pererabotki nefti i gaza (Chemistry and Technology of Petroleum and Gas Refining Processes) Moscow, Gostoptekhizdat, 1959. 278 p. (Series: Its: Trudy, vyp. 4) 2,500 copies printed.

Executive Ed.: T.D. Yefremova; Tech. Ed.: A.S. Polosina; Editorial Board: A.Z. Dorogochinskiy (Chairman), B.K. Amerik, G.I. Kaz'min, N.N. Kasakin, V.I. Lavrent'yev, Ye.S. Levchenko, and N.G. Mitrofanov (Deputy Chairman).

PURPOSE: This book is intended for petroleum engineers and technicians in scientific research institutes, planning organizations, and refineries.

COVERAGE: This collection of technical papers on oil and gas refining were originally discussed at the petroleum refining section of the Third GrozNII Scientific-Technical Congress in 1957. The articles have been published to help further the development of the petroleum refining industry and petrochemical industry in the Chechen-Ingush ASSR. The history and significance of the petroleum refining industry in the Groznyy region is outlined by A.Z. Dorogochinskiy with emphasis on the interdependence of the refineries and the aircraft, automobile and rocket manufacturing industries. Change in modern engines demand a change in fuel and lubricating oil properties. The increased use of jet aircraft makes the production of high octane aviation gasoline less important than the production of the new type of fuel, aviation kerosene, the yield of which requires a quite different refinery run. Since crudes recovered at the Karabulak-Achaluki fields represent a valuable raw material for manufacturing lubricating oil and paraffin wax, their properties have been thoroughly investigated and results of analyses reviewed. The re-equipment of the fuel producing line of refineries at Groznyy has been carried out on the basis of findings obtained from tests and pilot plant operations, and a number of reforming and platforming units have been built to upgrade the low octane gasoline produced at Groznyy. Tests were also conducted to ascertain the advisability of applying the destructive distillation of residues, which yields solar fractions badly needed for catalytic cracking unit as feed stock. Catalytic cracking units of the 43-102 type were first put on stream in the Groznyy refineries in 1952, and since that time continuous efforts have been made to boost their processing capacity, and improve the regeneration of catalysts. The authors make a number of suggestions as to how the throughput of the above units might be increased. The production of different types of pelleted and bead catalysts, the contamination of catalysts and their reactivation are discussed. The operation of a contact coking reactor, its design, and products yielded by contact coking units are described The authors also deal with the manufacture of lubricating oils, paraffin and ceresine wax and indicate way of improving their properties. Electrical dehydration and desalting of crude oil and of light products are discussed. The authors state that in recent years extensive studies were made on the chemical conversion of petroleum products, and particularly of gases. As a result, a number of gas fractionators and compressors were built and installed to produce phenol and acetone from propylene and benzene, to synthesize ethyl alcohol and oxidize paraffinic hydrocarbons. An article is devoted to problems of automating various processes and developing the related control and gage instruments. The book contains numerous tables with the characteristics of different petroleum products obtained from refinery processing units, pilot plants and petrochemical refinery sections. Each article is accompanied by references.

TABLE OF CONTENTS:

contains numerous tables with the characteristics of different petroleum products obtained from refinery processing units, pilot plants and petrochemical refinery sections. Each article is accompanied by references.

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II. IMPROVEMENTS IN THE FUEL PRODUCING LINE OF REFINERIES

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Nazaretova, N.B., A.A. Bashilov, B.K. Amerik, P.I. Krechetova, P.V. Ovsyannikov, and A.P. Sukhorebrikov. Refinery Experiments with Destructive Distillation of Mazout 48

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Card 7/9

ZHDANOVA, V.V.

Dilatometric study of solid solutions in the system $BiFeO_3$ - $Pb_{\frac{1}{2}}Fe_{\frac{1}{2}}NbO_3$. Fiz. tver. tela 7 no.1:143-147 Ja '65. (MIRA 18:3)

1. Institut poluprovodnikov AN SSSR, Leningrad.

ZHDANOVA, V.V.; KONTOROVA, T.A.

C_p C_v for Ge with varying content of electrically active impurities.
Fiz. tver. tela 7 no.5:1584-1586 My '65. (MIRA 18:5)

1. Institut poluprovodnikov AN SSSR, Leningrad.

ACCESSION NR: AT4016006 S/2625/63/000/015/0344/0350

AUTHOR: Svetozarova, O. I.; Zhdanova, V. V.; Nesmeyanova, T. S.; Levashova, E. P.; Kozorezova, A. I.; Nemchenko, S. A.; Minets, T. M.

TITLE: Study of the composition of gasolines obtained by catalytic cracking of highly paraffinic gas oils

SOURCE: Grozny*y. Neftyanoy nauchno-issledovatel'skiy institut. Trudy*, no. 15, 1963. Tekhnologiya pererabotki nefti i gaza. Neftekhimiya (Technology of processing petroleum and gas. Petroleum chemistry), 344-350

TOPIC TAGS: petroleum refining, gasoline, cracking, catalytic cracking, hydrocarbon composition, paraffinic petroleum, gas oil

ABSTRACT: The composition of the pentane-hexane fractions and aromatic hydrocarbons in gasolines boiling at up to 200C and obtained by catalytic cracking of petroleum gas-oil with a high content of paraffinic hydrocarbons was investigated. The experiment consisted of four stages: (1) Isolation of gasoline from the cracking products; (2) chromatographic separation of the fraction into paraffin-naphthene, unsaturated and aromatic portions on silicagel with a benzene activity of 13-15 ml/100 g.; (3) fractionation into small fractions

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on a column with 38 plates; and (4) the investigation of the individual composition of aromatic hydrocarbons by absorption spectrophotometry. Two samples of gasoline were analyzed. One was obtained under the usual conditions: 440C, volumetric velocity of fresh raw material 0.61/hr., weight ratio of catalyst to raw material 2.5:1, recycling factor 1.08. The second sample was obtained under severe conditions: 600C, velocity 0.47/hr., weight ratio 3.8:1. These gasolines were characterized by a high content of aromatic substances. Cracking under severe conditions yields a gasoline in which the content of aromatic hydrocarbons is twice that of the gasoline obtained under the usual conditions (30.1% against 61.6%). The percentage of aromatic hydrocarbons in gasolines remaining after boiling at 200C was found to be 83-95%. In gasolines obtained by catalytic cracking under usual and severe conditions after boiling at 200C, toluene, metaxylene, and 1,2,4-trimethylbenzene were found in the largest amount. The pentane-hexane fractions were characterized by a high content of isoparaffins. Orig. art. has: 3 tables.

ASSOCIATION: Neftyanoy nauchno-issledovatel'skiy institut, Grozny*y (Petroleum Scientific Research Institute)

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Card 2/2

BRACH, B.Ya.; ZHDANOVA, V.V.; LEV, Ye.Ya.

Thermoelectric properties of the system HgSe - HgTe. Fiz. tver. tela 3 no. 3:786-789 Mr '61. (MIRA 14:5)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Mercury selenide—Electric properties)
(Mercury telluride—Electric properties)

ZHDANOVA, V.V.

Second-order phase transition in SnSe. Fiz.tver.tela 3 no.5:1619-1620 My '61. (MIRA 14:6)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Tin selenide)

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AUTHOR: Zhdanova, V. V.; Kontorova, T. A. 44 44,55

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6

TITLE: Thermal expansion of doped germanium 7

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3331-3338

TOPIC TAGS: germanium semiconductor, semiconductor research, semiconductor theory, thermal expansion 21,44,55

ABSTRACT: The authors study the effect of impurities on the coefficient of thermal expansion α in n-Ge. Germanium doped with phosphorus, arsenic, antimony and silicon was studied. Measurements were made in the 77-350°K range. The carrier concentration was determined from the Hall effect. It was found that α increases with the concentration of electrically active impurities. Curves plotted for α as a function of temperature show that the coefficients of thermal expansion for P-doped Ge and for Ge containing small quantities of antimony were identical throughout the entire

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temperature range. In As-doped Ge with $n = 2.1 \cdot 10^{18}$ cm^{-3}, α nearly coincides with that for Sb-doped Ge with approximately the same concentration. These data indicate that α in n-Ge is determined solely by the concentration of free carriers, and not by the type of impurity responsible for these carriers. A study of n-Ge single crystals doped with silicon shows that distortions in the crystal lattice due to replacement of Ge atoms by Si atoms have little effect on the thermal expansion of Ge. The experimental data indicate that the increase in the coefficient of thermal expansion in germanium doped with electrically active impurities is due to free charge carriers, and not to distortions of the lattice by impurity atoms. Theoretical calculations and experimental data show that the thermal expansion of degenerate semiconductors with covalent bonds may be due to the effect of free charge carriers on the specific heat of the crystal lattice and on the Grüneisen constant. Orig. art. has: 2 figures, 1 table, 16 formulas.

SUB CODE: SS,TD/ SUBM DATE: 22Mar65/ ORIG REF: 006/ OTH REF: [illegible]

D'YACHENKO, P.F., prof.; ZHDANOVA, Ye.A., aspirant

[Recent developments in the chemistry of milk proteins and methods of their determination] Novoe v khimii belkov moloka i metodakh ikh opredeleniia. Moskva, TSentr. in-t nauchno-tekhn. informatsii pishchevoi promyshl., 1962. 77 p. (MIRA 17:4)